

CLAIMS

What is claimed is:

1. A speaker apparatus installable within a computer housing for generating low frequency sounds, comprising:

5 a speaker container;

a speaker removably retained within said container;

a speaker port coupled to said container to provide acoustic coupling between said speaker and a region outside said container and said computer housing.

10 2. The speaker apparatus according to Claim 1 further comprising at least one fastener to couple said speaker to said container.

3. The speaker apparatus according to Claim 1 wherein said container further comprises:

15 a first unit having a speaker retainer; and

a second unit, substantially similar to said first unit, further having a speaker retainer, said first container unit and said second container unit being configured to mate in such a fashion as to securely retain said speaker within said container.

20 4. The speaker apparatus according to Claim 1 further comprising an acoustic dampening element mounted to an interior surface of said speaker container.

5. The speaker apparatus according to Claim 1 wherein said speaker is mounted to an interior surface of said speaker container.

25 6. The speaker apparatus according to Claim 1 wherein said container comprises a front wall, a back wall, a top wall, a bottom wall, a first side wall, and a second side wall, each wall having the same area.

7. The speaker apparatus according to Claim 1 wherein said port has a length that is $\frac{4}{5}$ the depth of said container and a diameter that is $\frac{1}{5}$ the height of said container.

8. The speaker apparatus according to Claim 1 wherein said speaker is mounted behind a port formed within said container.

9. A computer system comprising:
a central processing unit (CPU) box, comprising:
a central processing unit;
a drive bay coupled to said central processing unit;
a speaker apparatus, coupled to said central processing unit and removably mounted towards a front portion of said CPU box, comprising:
a speaker container;
a speaker removably retained within said container;
a speaker port coupled to said container to provide acoustic coupling between said speaker and a region outside said container;
a user input device, coupled to said central processing unit; and
an output device, coupled to said central processing unit.

10. The computer system according to Claim 9 wherein said container further comprises:
a first unit having a speaker retainer; and
a second unit, substantially similar to said first unit, further having a speaker retainer,
said first container unit and said second unit ^{meeting} ~~mate~~ in such a fashion as to securely retain said speaker within said container.

11. The computer system according to Claim 9 further comprising an acoustic dampening element placed on an interior surface of said container.

12. The computer system according to Claim 9 wherein said speaker is mounted to face an interior surface of said container.

13. The computer system according to Claim 9 wherein said container comprises a front wall, a back wall, a top wall, a bottom wall, a side wall, and a second side wall, each wall having the same area.

14. The computer system according to Claim 9 wherein said port has a length that is $\frac{4}{5}$ ^athe depth of said container and a diameter that is $\frac{1}{5}$ ^athe height of said container.

15. The computer system according to Claim 9 wherein said speaker is mounted behind a port formed within said container.

16. The computer system according to Claim 9 further comprising at least one fastener to couple said speaker to said container and said container to said CPU box.

17. A speaker apparatus installable within a computer housing for generating low frequency sounds, comprising:

a speaker container having a top, back, front, bottom, and two side interior portions;

a speaker removably retained within said container, said speaker facing said bottom ^{interior} portion;

a speaker port formed in said front interior portion of said container to provide acoustic coupling between said speaker and a region outside said speaker container and said computer housing.

18. The speaker apparatus according to Claim 17 further comprising at least one fastener to couple said speaker to said container.

19. The speaker apparatus according to Claim 17 wherein said container further comprises:

a first unit having a speaker retainer; and

a second unit, substantially similar to said first unit, further having a speaker retainer,
said first container unit and said second container unit being configured to mate
in such a fashion as to securely retain said speaker within said container.

20. The speaker apparatus according to Claim 17 further comprising an acoustic dampening element mounted to an interior surface of said speaker container.

21. The speaker apparatus according to Claim 17 wherein said speaker is mounted to an interior surface of said speaker container.

22. The speaker apparatus according to Claim 17 wherein said container comprises a front wall, a back wall, a top wall, a bottom wall, a first side wall, and a second side wall, each wall having the same area.

23. The speaker apparatus according to Claim 17 wherein said port has a length that is $\frac{4}{5}$ ^a the depth of said container and a diameter that is $\frac{1}{5}$ ^a the height of said container.

24. A speaker apparatus installable within a computer housing for generating low frequency sounds, comprising:

a speaker container ~~having~~ ^a back and front interior portions;

a speaker removably retained within said container, said speaker facing said front portion of said speaker container;

a speaker port coupled to said front ^{interior} portion of said speaker container to provide acoustic coupling between said speaker and a region outside said container and said computer housing.

25. The speaker apparatus according to Claim 24 further comprising at least one fastener to couple said speaker to said container.

26. The speaker apparatus according to Claim 24 wherein said container further comprises:
a first unit having a speaker retainer; and
a second unit, substantially similar to said first unit, further having a speaker retainer, said first container unit and said second container unit being configured to mate in such a fashion as to securely retain said speaker within said container.

27. The speaker apparatus according to Claim 24 further comprising an acoustic dampening element mounted to said back interior portion of said speaker container.

28. The speaker apparatus according to Claim 24 wherein said speaker is mounted to an interior surface of said speaker container.

29. The speaker apparatus according to Claim 24 wherein said container comprises a front wall, a back wall, a top wall, a bottom wall, a first side wall, and a second side wall, each wall having the same area.

30. The speaker apparatus according to Claim 24 wherein said port has a length that is $\frac{4}{5}$ ^a the depth of said container and a diameter that is $\frac{1}{5}$ ^a the height of said container.

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31. A computer system comprising:
a central processing unit (CPU) box configured in a tower configuration, comprising:
a central processing unit;
a drive bay coupled to said central processing unit;
a speaker apparatus, coupled to said central processing unit and removably
mounted towards a front, bottom portion of said CPU box, comprising:
a speaker container;
a speaker removably retained within said container;
a speaker port coupled to said container to provide acoustic coupling
between said speaker and a region outside said container;
a user input device, coupled to said central processing unit; and
an output device, coupled to said central processing unit.

32. The computer system according to Claim 31 wherein said container
further comprises:
a first unit having a speaker retainer; and
a second unit, substantially similar to said first unit, further having a speaker retainer,
said first container unit and said second unit mating in such a fashion as to
securely retain said speaker within said container.

33. The computer system according to Claim 31 further comprising an
acoustic dampening element placed on an interior surface of said container.

34. The computer system according to Claim 31 wherein said speaker is
mounted to face an interior surface of said container.

35. The computer system according to Claim 31 wherein said container
comprises a front wall, a back wall, a top wall, a bottom wall, a side wall, and a
second side wall, each wall having the same area.

u 36. The computer system according to Claim 31 wherein said port has a length that is $\frac{4}{5}$ the depth of said container and a diameter that is $\frac{1}{5}$ the height of said container.

5 37. The computer system according to Claim 31 wherein said speaker is mounted behind a port formed within said container.

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10 38. The computer system according to Claim 31 further comprising a at least one fastener to couple said speaker to said container and said container to said CPU box.

15 39. A computer system comprising:
a central processing unit (CPU) box configured in a desktop configuration, comprising:
a central processing unit;
a drive bay coupled to said central processing unit;
a speaker apparatus, coupled to said central processing unit and removably mounted towards a front side portion of said CPU box; comprising:
a speaker container;
a speaker removably retained within said container;
20 a speaker port coupled to said container to provide acoustic coupling between said speaker and a region outside said container;
a user input device, coupled to said central processing unit; and
an output device, coupled to said central processing unit.

25 40. The computer system according to Claim 39 wherein said container further comprises:
a first unit having a speaker retainer; and

a second unit, substantially similar to said first unit, further having a speaker retainer, said first container unit and said second unit mating in such a fashion as to securely retain said speaker within said container.

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41. The computer system according to Claim 39 further comprising an acoustic dampening element placed on an interior surface of said container.

42. The computer system according to Claim 39 wherein said speaker is mounted to face an interior surface of said container.

43. The computer system according to Claim 39 wherein said container comprises a front wall, a back wall, a top wall, a bottom wall, a side wall, and a second side wall, each wall having the same area.

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44. The computer system according to Claim 39 wherein said port has a length that is $\frac{4}{5}$ ^a the depth of said container and a diameter that is $\frac{1}{4}$ ^a the length of said container.

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45. The computer system according to Claim 39 wherein said speaker is mounted behind a port formed within said container.

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46. The computer system according to Claim 39 further comprising a at least one fastener to couple said speaker to said container and said container to said CPU box.

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47. A method of assembling a computer system comprising:
providing an enclosure to contain said computer system;
securedly inserting a motherboard having a central processing unit within said enclosure;

securedly inserting at least one supplemental device within said enclosure and coupling said supplemental device to said motherboard;

securedly inserting a speaker module within said enclosure and coupling said supplemental device to said motherboard.

10 48. The method of assembling a computer system according to claim 47 wherein said speaker module inserting step comprises:

selecting a first half of a speaker enclosure;

placing a speaker within said first half of said speaker enclosure;

15 a a mating a second half of ^{to} said speaker enclosure to said first half of said speaker enclosure ~~for~~ form said speaker module; and

securing said speaker module within said enclosure via a fastener.

49. The method of assembling a computer system according to claim 48 wherein said speaker module inserting step ^{further} comprises:

placing said speaker module in a lower front portion of said enclosure wherein said enclosure is a tower computer case.

20 a 50. The method of assembling a computer system according to claim 48 wherein said speaker module inserting step ^{further} comprises:

25 placing said speaker module in a front side portion of said enclosure wherein said enclosure is a desktop computer case.

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51. The method of assembling a computer system according to claim 48 wherein said placing said speaker step further comprises orienting said speaker to be downward firing.

52. The method of assembling a computer system according to claim 48 wherein said placing said speaker step further comprises orienting said speaker to be forward firing.

53. The method of assembling a computer system according to claim 48 wherein said placing said speaker step ^{further} comprises placing a sound dampening element within said speaker module.

54. The method of assembling a computer system according to claim 48 further comprising a port within said speaker module.

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